

REMARKS/ARGUMENTS

Claims 1, 3 and 5-7 remain pending. Claims 2, 4 and 8 have been cancelled. Claims 9-16 have been added. Claims 1, 3 and 6-7 were amended to better clarify the scope of the invention. No new matter has been added.

References Cited in Specification/IDS

The listing of references in the specification was stated not to constitute a proper information disclosure statement because they were not on a separate paper. The office action further provides that if the references were not cited by the examiner on form PTO-892, then they were not considered.

The specification cites two references in the Description of Related Art section of the Background of the Invention. Both those references, i.e., DE 19740103 A1 and FR 856964A have been cited in form PTO-892 by the Examiner. Because each of the references found in the specification have been cited by the Examiner in form PTO-892, Assignee respectfully submits that no citation via separate information disclosure statement is necessary. Assignee respectfully submits that this issue has been rendered moot.

Objection to Claim 4 Based on Possible Grammatical Error

Claim 4 was objected to because it appeared to examiner that the claim contained a grammatical error. More particularly, the examiner suggests that the term "tens" be amended to read "tenths."

Claim 4 has been cancelled. Accordingly, Assignee respectfully requests that the Examiner withdraw this objection as moot since the term "tens" no longer appears in the claims.

Rejections Under 35 USC 112, 2nd paragraph

Claim 4 was rejected under 35 USC 112, 2nd paragraph as failing to point out and distinctly claim the subject matter which applicants regard as the invention.

More particularly, per Claim 4, the office action provides that the phrase "on the order of one to a few tens of millimeters" renders the claim indefinite. Claim 4 has been cancelled. Accordingly, Assignee respectfully submits that this indefiniteness rejection has been overcome.

Rejections Under 35 USC 102(b)

Claim 1 was rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,471,905 to Martin (hereinafter “the ‘905 Patent”). The ‘905 Patent discloses a structural armour component. However, the ‘905 does not disclose an inner layer being made from a very hard material to stop projectiles that passed through the outer plate. As disclosed in the ‘905 Patent, each of the face sheets 110, 120 of the structural members 100 has only some resistance to puncture by projectiles, since they comprise a high toughness, high strength titanium alloy. (See ‘905 Patent at Col. 2, lines 45-50)

The ‘905 Patent further discloses that for overcoming “the tendency of titanium to fail by adiabatic shear bands”, abrasive materials are inserted “into the cells of the core elements” (line 50 column 2). The ‘905 Patent is very explicit about providing only the cells of the spacer element 130 with the hard ceramic materials. (See ‘905 Patent at Col. 3, lines 3-15) The ‘905 Patent discloses a harder material for the core element 130 and its cells—not an inner layer. Accordingly, the ‘905 Patent does not disclose “an inner layer made from a very hard material to stop projectiles that passed through the outer plate” as recited in Claim 1 as previously presented.

Despite the fact that claim 1, as previously presented, is not anticipated by the ‘905 Patent, in order to better clarify the invention, Claim 1 has been amended to further include spacers for disposing the outer plate at a distance from the inner layer so that no part of the outer plate has any contact with the inner layer. This element is not shown in the ‘905 Patent. Claim 1 has also been amended to include a “fixing means for fixing the outer plate to the inner layer at the location of the spacers.

Accordingly, the ‘905 Patent clearly does not disclose all the elements of Claim 1. Accordingly, Assignee respectfully requests that this rejection has been overcome. Because Claims 2-14 depend from Claim 1, Assignee respectfully submits that this rejection has been overcome with respect to these dependent claims. Moreover, because Claim 15, the only independent claim other than Claim 1, includes all the limitations of Claim 1 and additional limitations, Assignee respectfully submits that Claim 15 and its dependent Claim 16 should not be subject to such a rejection as well.

Rejections Under 35 USC 103(a)

Claim Rejections Under 35 USC 103(a) Over Lanz

Claims 1, 3, 6 and 7 were rejected under 35 USC 103(a) as being unpatentable over European Patent 1182420A1 to Lanz (hereinafter “the EP ‘420 Patent”).

Regarding Claim 1, as amended, the EP ‘420 Patent does not disclose an outer plate 2 that has a constant thickness all over its full surface, since outer plate 2 has a greatest thickness at the location of the wing 13 (called “conducting element”). The wing 13 is made in one piece with the outer layer 2, so that wing 13 defines a rib for the plate.

Unlike the EP ‘420 Patent, Assignee’s disclosure indicates that “the invention can also significantly simplify the procurement of protection elements since aluminium protection plates [outer plate 2] or simple plate with no particular machining and with constant thickness...” (See Application, page 4, lines 18-23)

Further, in the EP ‘420 Patent, the spacers (9, 16) are not disposed so that no part of the outer plate 2 has any contact with the inner layer 1 since rib 13 (integral with outer plate 2) comes into contact with the inner layer 1 as shown in Figs 3.a and 4 of the EP ‘420 Patent. Accordingly, the EP ‘420 Patent does not—at a minimum—teach or suggest all the limitations of Claim 1. Assignee respectfully submits that the 35 USC §103 rejection over the EP ‘420 Patent has been overcome.

Because rejected Claims 3, 6 and 7 depend from Claim 1, the claim rejections under 35 USC §103 over the EP ‘420 Patent have been overcome for these dependent claims as well. However, for the following additional reasons, dependent claims 3, 6 and 7 are novel and unobvious over the EP ‘420 Patent.

Regarding claim 3, as amended, limitations have been added to the conducting element. More particularly, the claim now requires that the conducting elements are “distinct from the outer plate, said conducting elements being fixed to said outer plate and extending between the outer plate and the inner layer to provide electrical continuity between the outer plate and the inner layer, each conducting element having a bore.” Moreover, the following limitation for “attachment screws disposed in said bores at a distance from the inner layer for fixing the conducting elements to said outer plate.”

The EP '420 Patent does not disclose conducting elements 13, distinct from the outer plate 2 and fixed thereto. Since connecting elements 13 are integral with plate 2, the connecting elements have no bore, and no attachment screws are disposed in the bores at the distance from the inner layer 1 for fixing the conducting elements to the outer plate 2.

Regarding claim 6, as previously presented, each spacer of the EP '420 Patent has no oblong shape.

Regarding claim 7, the spacers (9, 16) of the EP '420 Patent are not fixed to both the inner layer and outer plate through a common threaded bore receiving at one end a first attachment screw and at a second end a second attachment screw. According to the EP '420 Patent, screw 10 is passing through a bore provided through inner layer 1 and spacer 9, whereas the second screw 12 passes through a second bore provided on both the outer plate 2 and said spacer 9, apart from the first bore. As shown in figure 4 of the EP '420 Patent, there is only one bore made through both spacer 16 and outer plate 2, for receiving screw 12.

Claim Rejections Under 35 USC 103(a) Over Martin

Claims 4 and 5 were rejected under 35 USC §103(a) over the '905 Patent to Martin. As set forth hereinabove, the rejection regarding Claim 4 is moot since that claim has been cancelled.

Regarding claim 5, the materials disclosed in the '905 Patent are very specific. These materials are titanium alloy for the face sheets 110, 120 and titanium alloy improved by the insertion of abrasive materials into the cells, for the core element 130. As a consequence, the '905 Patent does not teach using steel for the inner layer and aluminium for the outer plate. According to the '905 Patent, both the outer and inner plates 110, 120 must be made of the same material defined as titanium alloy. Furthermore, the '905 Patent refers to "a weight efficient, stiff structure". (See '905 Patent, line 21) Making the inner layer of steel would not lead to such a weight-efficient structure.

Additional Comments (New Claims)

New claims 9-16 have been added. These claims recite features which are not disclosed in the cited prior art.

Claim 9 refers to the spacers 7, 7', 13, 14 having bores for the passage of the fixing means 5, 5', 5'', 11 therethrough, at least some of the bores being oblong.

New Claim 10, which depends from new Claim 9, refers to bores, which are threaded and fixing means which include screws.

New Claim 11, which depends from Claim 1, refers to a series of inner layers 1 and outer plates 2, said inner layers of the series being assembled together for defining a vehicle body work and said vehicle bodywork is covered on the outside by said series of outer plates 1, as explained in the description page 2 lines 17-28, page 1 line 1-10 and page 4 lines 7-22.

New Claim 12, which depends from new Claim 11, recites that the inner layers of the series are steel plates.

New Claim 13, which depends from Claim 1, recites an outer layer 2 having an entirely flat shape. The EP '420 Patent, for example, does not disclose that the outer plate is entirely flat-shaped.

New Claim 14, which depends from Claim 3, recites the connecting elements 3 are flexible to enable differential dilatations between the outer plate 2 and the inner layer 1. In the cited prior art, the conducting elements are not flexible.

New independent Claim 15 includes the features of claim 1, together with fixing means (5, 5', 5'', 11) extending to bores made through both the spacers (7, 7', 13, 14) and a hole of the outer plate 2. Such bores and hole are not disclosed, for example, in the '905 Patent. In the EP '420 Patent, a part (free end of rib 13) appears to be in contact with the inner layer 1, contrary to new Claim 15.

New Claim 16, which depends from new independent Claim 15, recites that the outer plate 2 has a peripheral edge and at least one of the spacers (7, 7', 13, 14) is interposed between the outer plate 2 and the inner layer 1, at a distance from said peripheral edge, as illustrated in figures 1-4 of Assignee's Application. In the cited prior art, such a feature is not disclosed.

Conclusion

The undersigned respectfully submits that this application is in condition for allowance. Early and favorable reconsideration and allowance of this application is respectfully requested. If any outstanding issues might be resolved by an interview or an

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Amdt. dated December 24, 2007

Reply to office action of September 28, 2007

Examiner's amendment, the Examiner is invited to call the representative of the assignee of the entire interest of this application at the telephone number shown below.

Because this office action is filed within three (3) months of the PTO mailing date, Assignee believes no fees are due at this time. However, if any petition for extension of time is deemed necessary, a petition under 37 C.F.R. 1.136 is hereby made.

Respectfully submitted,

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